# Exhibit 1

## IN THE UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF TEXAS TYLER DIVISION

SFA SYSTEMS, LLC,

PLAINTIFF,

v.

Civil Action No. 6:07-cv-00067 Jury Trial Demanded

INFOR, et al.,

DEFENDANTS.

### SUPPLEMENTAL EXPERT REPORT OF DANIEL E. COOKE, PH.D.

July 17, 2009

#### Introduction

- This is a Supplemental Report of Invalidity to my Report of Invalidity, dated May 7, 2009.
- 2. This Supplemental Report is provided as requested by counsel for SFA during my deposition of July 16, 2009. SFA counsel asked me to provide any supplemental reports and written summaries I may create and instructed that I provided them as soon as possible.
- 3. This Report was created by me on July 16 and 17, 2009, immediately following my deposition the day before on July 16, 2009, and also incorporates my Report of May 7, 2009 in its entirety.

#### Lack of Written Description (35 U.S.C. § 112)

- 4. The application that ultimately issued as the '525 Patent, as-filed, does not provide adequate written description for the claims as construed by the court to demonstrate that the inventors had possession of the claimed invention. In particular, there is no written disclosure for (i) what "inferring" is; (ii) how "inferring" is made, used, or carried out; (iii) inferring occurrence of an event; and (iv) inferring...a context in which the event occurred.
- 5. The '525 patent discloses no working or even prophetic examples of a sales system or method that *infers the occurrence of an event*, that is, the logical process by which the fact that the event has occurred is derived by application of logical rules.
- 6. The '525 patent discloses no working or even prophetic examples of a sales system or method that *infers a context in which the event occurred*, that is, the logical process by which the fact that information already existing within the system that becomes relevant upon the occurrence of the event is derived by application of logical rules.
- 7. I make these opinions with the understanding, and relying upon, that the Court construed "inferring" as the "logical process by which a factual conclusion is derived from known facts by the application of logical rules."
- 8. The '525 patent does not include any disclosure related to using rules to reach a factual conclusion. In contrast, the '525 patent only discloses the use of rules, applied to facts, to

- algorithmically direct next steps. It does not, however, apply logical rules to known facts to derive factual conclusions, i.e. to infer occurrence of the event and a context in which the event occurred.
- 9. In sum, nothing in the '525 patent discloses that the inventors possessed an invention that derived factual conclusions from known facts by the application of logical rules at the time of filing.
- 10. I understand that the Court construed "expert system" as "a software program operating on a set of rules which can be automatically updated based upon successful sales approaches."
- 11. To the extent the meaning of the term "expert system" in the claims is limited to the expert system as construed by the Court, this "expert system" appears adequately described in the '525 patent.
- 12. This understanding of an "expert system" is not consistent with the understanding of an "expert system" that one skilled in the art would have had in 1995.
- In 1995, one skilled in the art would have understood an expert system to be comprised of: (1) a knowledge base and (2) an inference engine. The knowledge base further includes: (1) facts and (2) rules. The inference engine of this expert system uses rules to add data to the system or to gain knowledge, not to identify next steps to take algorithmically. Susan J. Hazen, Sachi Sakthivel & John R. Slater, *On Selecting Appropriate Technology for Knowledge Systems; Expert Systems and Artificial Neural Network Knowledge System Technologies*, 44 J. of Sys. Mgmt. 10 (1993). Furthermore, no mention is made in the specification that the inference engine was to be forward chaining or backward chaining.
- 14. The '525 patent does not convey to one skilled in the art that the inventors of the '525 Patent possessed an expert system as would have been understood by one skilled in the art in 1995 (as detailed in the preceding paragraph).
- 15. In forming my opinions on lack of written description, above, I rely on the requirement that written description is intended to ensure that the inventors disclose at the time of filing the technological knowledge upon which the patent is based and demonstrate that

- the patentee was in possession, at the time of application filing, the claimed invention, as construed by the Court. Consequently, the disclosure in the patent document must allow persons of ordinary skill in the art to recognize that the applicant invented what is claimed, and that the inventors were in possession of the invention at the time of filing (e.g., including all elements and limitations of the claims). Accordingly, I understand that a patent claim is invalid if the inventors of the '525 Patent failed to describe, or convey possession of, the claimed system or method at the time of filing.
- 16. Further, my opinions on lack of written description rely on the fact that it is not whether one skilled in the art might be able to construct the patentee's device from (i) the teachings of the disclosure; or (ii) the knowledge of one skilled in the art. Rather, the written description must show that the inventors were in possession of the invention.

#### Lack of Enablement (35 U.S.C. § 112)

- 17. The application that ultimately issued as the '525 Patent, as-filed, does not enable a person of ordinary skill in the art to make and use the claimed invention, as construed by the Court. As a result, the asserted claims lack enabling disclosure.
- 18. The '525 patent discloses no enabling instruction, nor working or prophetic examples, of a sales system or method that *infers the occurrence of an event*, that is, the logical process by which the fact that the event has occurred is derived by application of logical rules.
- 19. The '525 patent discloses no enabling instruction, nor working or prophetic examples, of a sales system or method that *infers a context in which the event occurred*, that is, the logical process by which the fact information already existing within the system that becomes relevant upon the occurrence of the event is derived by application of logical rules.
- 20. Again, I understand that the Court construed "expert system" as "a software program operating on a set of rules which can be automatically updated based upon successful sales approaches."
- 21. To the extent the meaning of the term "expert system" in the claims is limited to the expert system as construed by the Court, this "expert system" is not enabled by the disclosure of the '525 patent.

- 22. This understanding of an "expert system" is not consistent with the understanding of an "expert system" that one skilled in the art would have had in 1995.
- 23. In 1995, one skilled in the art would have understood an expert system to be comprised of: (1) a knowledge base and (2) an inference engine. The knowledge base further includes: (1) facts and (2) rules. The inference engine of this expert system uses rules to add data to the system or to gain knowledge, not to identify next steps to take algorithmically. Susan J. Hazen, Sachi Sakthivel & John R. Slater, On Selecting Appropriate Technology for Knowledge Systems; Expert Systems and Artificial Neural Network Knowledge System Technologies, 44 J. of Sys. Mgmt. 10 (1993). Furthermore, no mention is made in the specification that the inference engine was to be forward chaining or backward chaining.
- 24. The '525 patent also does not enable one skilled in the art how to make and use an "expert system" as an "expert system" as would have been understood by one skilled in the art in 1995 (as detailed in the preceding paragraph).
- 25. Thus, it is my opinion that one skilled in the art would need a significantly more detailed specification in order to make and use: (i) a system or method that "infers"; (ii) a system or method that infers occurrence of the event; (iii) a system or method that infers...a context in which the event occurred; and (iv) an expert system as construed by the Court, or as understood by one skilled in the art in 1995.
- 26. In forming my opinions on lack of enablement, above, I rely on the understanding that a patent claim is invalid if the specification fails to enable a person of ordinary skill in the art how to make and use the invention. Accordingly, I understand that a patent claim is invalid if the inventors of the '525 Patent failed to adequately enable some way of making the claimed system or performing the claimed method at the time of filing.

#### **Obviousness (35 U.S.C. § 103)**

27. Further to at least paragraphs 27, 28, 124-126, 128, 136, 141, 147, 154, 161, 168, 175, 181, and the claim charts of Appendix C, of my Report of May 7, 2009, where I provide opinion that the claimed invention of the '525 Patent is obvious in view of the prior art cited in my Report of May 7, 2009, find attached a chart summarizing how the prior art

- renders obvious the elements of the claims. As requested by SFA counsel in my deposition of July 16, 2009, the attached chart illustrates the possible combinations of prior art that render the claimed invention obvious.
- 28. In addition, I provide below a few specific example combinations of the prior art illustrating obviousness as directed to representative independent claim 1.

#### Claim 1, Preamble

- "A computer implemented sales system used to facilitate a sales process, the system comprising:"
- 29. At least Filepp (US 5,347,632), Long (US 5,117,354), Lockwood (US 4,567,359), Deaton (US 5,201,010), Cragun (US 5,774,868), and Gorog (US 4,947,028) disclose a computer implemented sales system used to facilitate a sales process.

#### Claim 1, Element a

"an event manager, coupled to the subsystems, the event manager"

30. At least Filepp (US 5,347,632), Long (US 5,117,354), Lockwood (US 4,567,359), Deaton (US 5,201,010), Cragun (US 5,774,868), and Gorog (US 4,947,028) disclose an event manager coupled to the subsystems.

#### Claim 1, Element b

"detecting one or more changes in state characteristic of an event occurring within the system,"

31. At least Filepp (US 5,347,632), Long (US 5,117,354), Lockwood (US 4,567,359), Spezialetti (An Approach to Reducing Delays in Recognizing Distributed Event Occurrences), and Gorog (US 4,947,028) disclose the detecting of one or more changes in state characteristic of an event occurring within the system.

#### Claim 1, Element c

"inferring occurrence of the event and a context in which the event occurred based at least in part on the detected changes in state, and"

32. At least Spezialetti (An Approach to Reducing Delays in Recognizing Distributed Event Occurrences), Lockwood (US 4,567,359), Deaton (US 5,201,010), Cragun (US 5,774,868), and Gorog (US 4,947,028) discloses inferring the occurrence of the event and

a context in which the event occurred based at least in part on the detected changes in state."

#### Claim 1, Element d

- "automatically initiating an operation in one or more particular subsystems of the computer to facilitate a new action based on the inferred context."
- 33. At least Filepp (US 5,347,632), Long (US 5,117,354), Lockwood (US 4,567,359), Deaton (US 5,201,010), Cragun (US 5,774,868), Gorog (US 4,947,028) and Stone (Expert Systems and Sales Strategies) automatically initiate an operation in one or more particular subsystems of a computer to facilitate a new action based on the inferred context.
- 34. The prior art summaries included in my Report of May 7, 2009, from paragraphs 130-182, provide a summary of the known techniques of each respective prior art reference, discuss how, and provide a suggestion why, each can be applied to improve the other prior art devices, for improvement to yield predictable results, each having a reasonable expectation of success.
- As a representative example directed to independent claim 1 (or any of the independent claims) of prior art reference combinations rendering the claim obvious are Spezialetti (An Approach to Reducing Delays in Recognizing Distributed Event Occurrences), alone, or in combination with any one of Filepp (US 5,347,632), Long (US 5,117,354), Lockwood (US 4,567,359), Deaton (US 5,201,010), Cragun (US 5,774,868), and Gorog (US 4,947,028). These combinations disclose each and every element of claim 1 (or any independent claim). For coverage of respective dependent claims, see the attached chart.
- 36. Motivation to combine exists as Spezialetti teaches an approach to reduce delays in event recognition by incorporating knowledge about the characteristics of event behavior into an evaluation protocol, for inferring occurrence of the event. This localizes information required for event recognition at the place of evaluation, decreasing the impact of communication delays due to the time lapse between event occurrence and event recognition. One skilled in the art, and working with event driven, rule based sales systems, would recognize the predictable improvements that Spezialetti's teachings of inference capability could provide.

- 37. As another representative example directed to independent claim 1 (or any of the independent claims) of prior art reference combinations rendering the claim obvious are Deaton (US 5,201,010), alone, or in combination with any one of Filepp (US 5,347,632), Long (US 5,117,354), Lockwood (US 4,567,359), Cragun (US 5,774,868), and Gorog (US 4,947,028). These combinations disclose each and every element of claim 1 (or any independent claim). For coverage of respective dependent claims, see the attached chart, for disclosure by Deaton and/or the respective combined prior art reference.
- 38. Motivation to combine exists as Deaton (US 5,201,010) teaches the performance of targeted marketing during sales transaction processing, the inferencing of event (type of sale or type of customer) and context (inferring relevant customer and transaction data). One skilled in the art, and working with event driven, rule based sales systems, would recognize the predictable improvements that Deaton's teachings of inference capability could provide.
- 39. As a further representative example directed to independent claim 1 (or any of the independent claims) of prior art reference combinations rendering the claim obvious are Cragun (US 5,774,868), alone, or in combination with any one of Filepp (US 5,347,632), Long (US 5,117,354), Lockwood (US 4,567,359), Deaton (US 5,201,010), and Gorog (US 4,947,028). These combinations disclose each and every element of claim 1 (or any independent claim). For coverage of respective dependent claims, see the attached chart, for disclosure by Cragun and/or the respective combined prior art reference.
- 40. Motivation to combine exists as Cragun (US 5,774,868) teaches the performance of targeted marketing during sales transaction processing, the inferencing of event (type of purchase class) and context (inferring purchase transaction data). One skilled in the art, and working with event driven, rule based sales systems, would recognize the predictable improvements that Cragun's teachings of inference capability could provide.
- 41. In forming my opinions on obviousness, I rely on my understanding of obviousness, and the obviousness factors and rationales, as detailed in paragraphs 41-46 of my May 7, 2009 Report.

#### Conclusion

42. It is my opinion, based on my analysis of the '525 Patent (including its prosecution history), in view of the claims as construed by the Court and the prior art cited herein, that the claims of the '525 Patent are invalid due to: 1) lack of written description under 35 USC §112; lack of enablement under 35 USC §112; anticipation under 35 USC §102; and obviousness under 35 USC §103.

Daniel E. Cooke, Ph.D

July 17, 2009

# SUMMARY OF APPENDIX C TO MAY 7, 2009 EXPERT REPORT OF DANIEL E. COOKE, PH.D.

Claims							Τ	
(with independent claims subdivided)	Filepp US 5,347,632	<b>Long</b> US 5,117,354	<b>Lockwood</b> US 4,567,359	<b>Deaton</b> US 5,201,010	<b>Cragun</b> US 5,774,868	<b>Gorog</b> US 4,947,028	Stone Expert Systems	Spezialetti An Approach
Claim 1: A computer implemented	X	X	X	X	X	X	X	
a plurality of subsystems	X	X	X	X	X	Х	X	X
an event manager, coupled to	X	X	X	X	X	X	X	X
inferring occurrence	X	X	X	X	X	X	X	X
automatically initiating	X	X	X	X	X	X	X	
Claim 2	X	X	X	X	X	X	X	
Claim 3	X	X	Х	X	X	X	X	
Claim 5	X	X	Х	X	X	X	X	
Claim 6		X	X	X	X	X	X	
Claim 7	X	Х	X	X	X	X	X	
Claim 8		X		X	X		X	
Claim 10		X		X	X		X	
Claim 12		X		X	X		X	

Claims (with independent claims subdivided)	Filepp	Long	Lockwood	Deaton	Cragun	Gorog	Stone	Spezialetti
Claim 20: A method of facilitating	X	X	X	X	X	X	X	
automatically detecting	X	X	X	X	X	X	X	X
inferring occurrence	X	X	X	X	Х	Х	Х	Х
automatically initiating	X	X	X	X	X	X	X	
Claim 24	Х	X	X	X	X	Х	X	
Claim 34	X	X	X	X	X	X	X	
Claim 35		X		X	X		Х	
Claim 37		X		X	X		X	_
Claim 40: A computer implemented	X	X	X	X	X	Х	X	
a plurality of subsystems	X	X	X	X	X	X	Х	Х
an event manager, coupled todetect	Х	X	X	X	X	Х	X	X
infer occurrence	X	X	X	X	X	X	X	X
link the inferred event	Х	X	X	X	X	X	Х	
automatically initiate	X	X	X	X	X	X	X	
Claim 41 Claim 42				X	X		X	